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10/000,087	12/04/2001	Tetsuya Shimizu	35.C16002	8033

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EXAMINER

GILES, NICHOLAS G

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/000,087

Applicant(s)

SHIMIZU, TETSUYA

Examiner

Nicholas G. Giles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims **8 and 12** recites the limitation "the moving image data" the 12th line of claim 8 and the 6th line of claim 12. There is insufficient antecedent basis for this limitation in the claim. For examination purposes claims 1 and 11 state the "still image processing means" outputs still image data and claims 8 and 12 will be treated as so.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims **1 and 5-6** are rejected under 35 U.S.C. 102(e) as being anticipated by Juen (U.S. Pub. No. 2002/0024602).

An image pickup apparatus comprising: an image pickup means for outputting an image signal having a first number of pixels which is greater than a predetermined number of pixels (imaging means 1 Fig. 1 and ¶0040); a converting means for converting the image signal having the

first number of pixels, outputted from said image pickup means, into an image signal having the predetermined number of pixels (pixel density conversion means 2 Fig. 1 and ¶0040); a first memory having storage capacity corresponding to the predetermined number of pixels, for storing the image signal having the predetermined number of pixels, outputted from said converting means (moving image recording means 3 Fig. 1 which includes coding conversion circuit 21 which includes memory 42, ¶0079, ¶0070, and ¶0073); a second memory having storage capacity corresponding to the first number of pixels, for storing the image signal having the first number of pixels, outputted from said image pickup means (buffer 5 Fig. 2 which includes memory 22, ¶0079); and still image processing means for outputting as still image data the image signal having the first number of pixels, read out from said second memory (¶0043).

Regarding claim 5, see the rejection of claim 1 and note that Juen further discloses:

Recording means for recording onto a recording medium the image signal read out from said first memory, wherein the predetermined number of pixels is a number of pixels determined in accordance with a recording format of said recording means (¶0038-0039 and ¶0090).

Regarding claim 6, see the rejection of claim 1 and note that Juen further discloses:

Still image processing means includes encoding means for encoding the image signal outputted from said second memory and compressing an amount of information of the image signal (coding conversion component 21 included in compression means 7 Fig. 5, ¶¶0070-0078, ¶¶0049, ¶¶0090, and ¶¶0108).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **2-4 and 10-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Juen in view of Tojo et al. (U.S. Patent No. 5,737,014).

Regarding claim **2**, see the rejection of claim **1** and note that Juen is silent with regards to providing multiple pieces of the circuit on the same integrated circuit while the second memory is provided separately. Official Notice is taken that it was well known at the time the invention was made to provide multiple pieces of circuitry on the same integrated circuit. An advantage to doing so is that loose wiring is avoided and space is saved for other components. Tojo et al. discloses using removable buffer memory, which would be a separate circuit than the integrated circuit, as a buffer memory in a camera (memory 7 Fig. 1, 2:67-3:9, and 3:65-4:2). Juen's camera uses buffer memory and therefore the removable buffer memory of Tojo et al. could be used

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in its place. An advantage to making the second memory on a separate circuit is that as memory sizes get larger they can be used as replacements in the removable buffer memory setup. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's camera include the first memory and still image processing means on one integrated circuit and the second memory on a separate circuit.

Regarding claim 3, see the rejection of claim 2 and note that Juen further discloses:

Special effect means for performing a special effect processing on the image signal having the predetermined number of pixels, stored in said first memory and outputting the thus-processed image signal (§§0070-§§0078 done through Coding conversion component 21 included in moving image recording means 3 Fig. 1).

Note that the limitation of providing components (in this case the special effect means) on the same integrated circuit was covered in the rejection of claim 2.

Regarding claim 4, see the rejection of claim 2 and note that Juen further discloses:

Output means for converting the image signal having the predetermined number of pixels, stored in said first memory into a predetermined format and outputting the thus-converted image signal (encoding conversion component 6 Fig. 3, §§0047 and §§0090).

Note that the limitation of providing components (in this case the output means) on the same integrated circuit was covered in the rejection of claim 2.

Regarding claim 10, Juen discloses:

An image processing apparatus comprising: an input unit arranged to input an image signal having a first number of pixels which is greater than a predetermined number of pixels (imaging means 1 Fig. 1 and ¶0040); a conversion circuit arranged to convert the inputted image signal having the first number of pixels into an image signal having the predetermined number of pixels (pixel density conversion means 2 Fig. 1 and ¶0040); a first memory having storage capacity sufficient for the predetermined number of pixels, arranged to store the image signal having the predetermined number of pixels, outputted from said conversion circuit (moving image recording means 3 Fig. 1 which includes coding conversion circuit 21 which includes memory 42, ¶0079, ¶0070, and ¶0073); a memory interface arranged to write into a second memory having a storage capacity corresponding to the first number of pixels, the image signal having the first number of pixels, outputted from the input unit, and read out from said second memory the image signal having the first number of pixels (buffer 5 Fig. 2 which includes memory 22, ¶0079); and a still image processing circuit arranged to output as still image data the image signal having the first number of pixels, read out by the memory interface (¶0043).

Juen is silent with regards to providing multiple pieces of the circuit on the same integrated circuit while the second memory is provided separately. Official Notice is taken that it was well known at the time the invention was made to provide multiple pieces of circuitry on the same integrated circuit. An advantage to doing so is that loose wiring is avoided and space is saved for other components. Tojo et al. discloses using removable buffer memory, which would be a separate circuit than the integrated circuit, as a buffer memory in a camera (memory 7 Fig. 1, 2:67-3:9, and 3:65-4:2). Juen's camera uses buffer memory and therefore the removable buffer memory of Tojo et al. could be used in its place. An advantage to making the second memory on a separate circuit is that as memory sizes get larger they can be used as replacements in the removable buffer memory setup. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's camera include the input unit, conversion circuit, first memory, memory interface, and still image processing circuit on one integrated circuit and the second memory on a separate circuit.

Regarding claim **11**, Juen discloses:

An image pickup apparatus comprising: an image pickup means for outputting an image signal having a first number of pixels which is greater than a predetermined number of pixels (imaging means 1 Fig. 1 and ¶0040); converting means for converting the image signal, having the first number of pixels, outputted from said image pickup means into an image signal having the predetermined number of pixels (pixel density

conversion means 2 Fig. 1 and ¶0040); a first memory for storing the image signal having the predetermined number of pixels (moving image recording means 3 Fig. 1 which includes coding conversion circuit 21 which includes memory 42, ¶0079, ¶0070, and ¶0073); a second memory for storing the image signal having the first number of pixels (buffer 5 Fig. 2 which includes memory 22, ¶0079); a memory interface for writing to said first memory the image signal having the predetermined number of pixels, outputted from the converting means (¶0039), reading out from said first memory the image signal having the predetermined number of pixels (¶0039), writing into said second memory the image signal having the first number of pixels, outputted from the inputted image pickup means (¶0039), reading out from said second memory the image signal having the first number of pixels (¶0039); moving image processing means for outputting as moving image data the image signal having the predetermined number of pixels, read out from the first memory (¶0039); and still image processing means for outputting as still image data the image signal having the first number of pixels, read out from the second memory (¶0039).

Juen is silent with regards to providing multiple pieces of the circuit on the same integrated circuit while the first and second memory are provided separately. Official Notice is taken that it was well known at the time the invention was made to provide multiple pieces of circuitry on the same integrated circuit. An advantage to doing so is

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that loose wiring is avoided and space is saved for other components. Tojo et al. discloses using removable memory, which would be a separate circuit than the integrated circuit, as a memory in a camera (memory 7 Fig. 1, 2:67-3:9, and 3:65-4:2). Juen's camera uses memory and therefore the removable memory of Tojo et al. could be used in its place. An advantage to making the first and second memory on separate circuits is that as memory sizes get larger they can be used as replacements in the removable memory setup. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's camera include the converting means, memory interface, moving image processing means, and still image processing means on one integrated circuit and the first and second memory on separate circuits.

Regarding claim **12**, see the rejection of claim 11 and note that further discloses:

Moving image processing means for reading out from said first memory an image signal having the predetermined number of pixels and outputting the read-out image signal as moving image data (§0039); first recording means for recording to a first recording medium the moving image data outputted from said moving image processing means (§0039); and second recording means for recording to a second recording medium, the still image data outputted from said still image processing means (§0039 and §0114).

Juen is silent with regards to storing the moving image data and still image data on different recording mediums. Official Notice is taken that it was well known in the art at the time the invention was made to store moving images on magnetic tape and still images on a memory card. An advantage to storing the data on different mediums is that the user has quick access to the type of imaging desired and doesn't have to spend time sorting through one medium. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's camera include storing the still images and moving images on different recording mediums.

Regarding claim **13**, see the rejection of claim 12 and note that Juen further discloses that the recording mediums can be magnetic tape and a memory card (§0114).

Regarding claim **14**, Juen discloses:

An image processing apparatus comprising: an input unit arranged to input an image signal having a first number of pixels which is greater than a predetermined number of pixels (imaging means 1 Fig. 1 and §0040); a conversion circuit arranged to convert the image signal having the first number of pixels, outputted from the input unit, into an image signal having the predetermined number of pixels (pixel density conversion means 2 Fig. 1 and §0040); a memory interface arranged to write into a first memory for a moving image the image signal having the predetermined number of pixels, outputted from said conversion circuit (§0039), read out the image signal having the predetermined number of

pixels from said first memory (¶0039), write into a second memory the image signal having the first number of pixels, outputted from the input unit (¶0039), and read out from said second memory the image signal having the first number of pixels (¶0039); a moving image processing circuit arranged to output as moving image data the image signal having the predetermined number of pixels, read out from said first memory (¶0039); and a still image processing circuit arranged to output as still image data the image signal having the first number of pixels, read out from the second memory (¶0039).

Juen is silent with regards to providing multiple pieces of the circuit on the same integrated circuit while the first and second memory are provided separately. Official Notice is taken that it was well known at the time the invention was made to provide multiple pieces of circuitry on the same integrated circuit. An advantage to doing so is that loose wiring is avoided and space is saved for other components. Tojo et al. discloses using removable memory, which would be a separate circuit than the integrated circuit, as a memory in a camera (memory 7 Fig. 1, 2:67-3:9, and 3:65-4:2). Juen's camera uses memory and therefore the removable memory of Tojo et al. could be used in its place. An advantage to making the first and second memory on separate circuits is that as memory sizes get larger they can be used as replacements in the removable memory setup. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's camera include the input unit, conversion circuit, memory interface, moving image processing

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include the input unit, conversion circuit, memory interface, moving image processing circuit, and still image processing circuit on one integrated circuit and the first and second memory on separate circuits.

7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juen.

Regarding claim 7, see the rejection of claim 1 and note that Juen further discloses reducing the pixel resolution to $\frac{1}{2}$ of the original resolution in moving image mode (§§0058 and §0084) and leaving the resolution as is in still image mode. (§0052, note there is no pixel density conversion means between the imaging means 1 and the still image recording means 4) Juen is silent with regards to obtaining the $\frac{1}{2}$ resolution image by adding signals of pixels of vertically-adjacent lines of the image pickup elements (pixel binning does this). Official Notice is taken that pixel binning was well known at the time the invention was made. An advantage to pixel binning is that space in image memory and moving image processing time can be saved. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's $\frac{1}{2}$ resolution moving image be obtained by adding signals of pixels of vertically-adjacent lines of the image pickup elements (pixel binning).

Regarding claim 8, see the rejection of claim 1 and note that Juen further discloses:

outputting the read-out image signal as moving image data (§0039); first recording means for recording to a first recording medium the moving image data outputted from said moving image processing means (§0039); and second recording means for recording to a second recording medium, the still image data outputted from said still image processing means (§0039 and §0114).

Juen is silent with regards to storing the moving image data and still image data on different recording mediums. Official Notice is taken that it was well known in the art at the time the invention was made to store moving images on magnetic tape and still images on a memory card. An advantage to storing the data on different mediums is that the user has quick access to the type of imaging desired and doesn't have to spend time sorting through one medium. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Juen's camera include storing the still images and moving images on different recording mediums.

Regarding claim 9, see the rejection of claim 8 and note that Juen further discloses that the recording mediums can be magnetic tape and a memory card (§0114).


~~Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas G. Giles whose telephone number is (571)-~~

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas G. Giles whose telephone number is (571) 272-2824. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc - Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NGG


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER